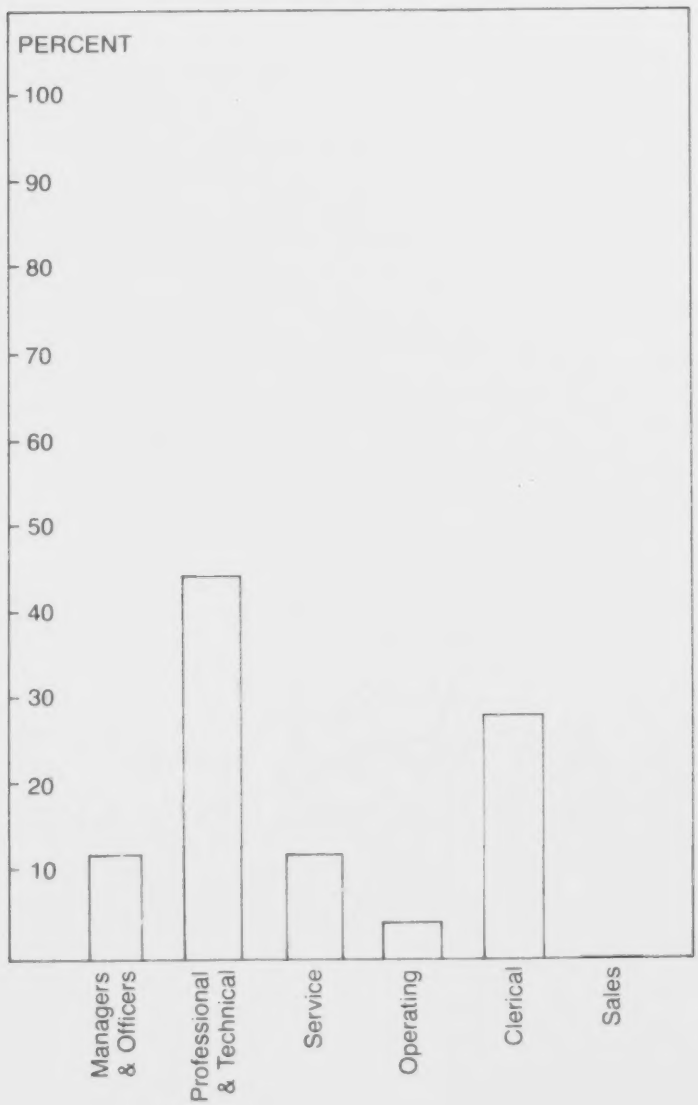
Occupation	*Estimated Employment	Percent of Total Employment 1/
SERVICE OCCUPATIONS (Continued)		
Forest Conservation Workers	185	.31
Guards and Doorkeepers	150	.25
Janitors, Porters, and Cleaners	655	1.10
Kitchen Helpers	35	.05
Nurse Aides and/or Orderlies	120	.20
Police Patrol Officers	2,080	3.49
Social Service Aides	770	1.29
All Other Food Service Workers	2/	
All Other Service Workers	2/	
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	2,060	3.47
Supervisors, Nonworking	875	1.46
Engineering-Equipment Mechanics	75	.12
Gardeners and Groundskeepers	85	.14
Helpers, Trades	40	.06
Maintenance Repairers, General Utility	115	.19
Mechanics, Automotive	60	.10
Mechanics, Maintenance	185	.31
Stationary Engineers	75	.12
Truck Drivers	60	.10
All Other Mechanics and Repairers	130	.22
All Other Skilled Craftsmen and Kindred Workers	35	.06
All Other Operatives and Semiskilled Workers	65	.11
All Other Laborers and Unskilled Workers	260	.43
CLERICAL OCCUPATIONS, TOTAL	16,855	28.30
Clerical Supervisors, Office or Plant	1,010	1.69
Accounting Clerks	815	1.36
Computer Operators	285	.47
Court Clerks	75	.12
Dispatchers-Police, Fire and Ambulance	220	.37
Duplicating Machine Operators	240	.40
Eligibility Workers, Welfare	260	.43
General Clerks, Office	4,175	7.01
Keypunch Operators	785	1.31
Library Assistants	30	.05

Occupation	Estimated Employment	Percent of Total Employment 1/
CLERICAL OCCUPATIONS (Continued)		
License Clerks	75	.12
Mail Clerks	80	.13
Messengers	70	.11
Personnel Clerks	180	.30
Procurement Clerks	70	.11
Production Clerks and/or Coordinators	50	.08
Receptionists	80	.13
Secretaries	2,680	4.50
Statistical Clerks	360	.60
Stenographers	1,105	1.85
Stock Clerks-Stockroom, Warehouse or Storage Yard	200	.33
Switchboard Operator-Receptionists	45	.07
Switchboard Operators	70	.11
Typists	3,365	5.65
All Other Office Machine Operators	55	.09
All Other Office Clerical Workers	475	.79

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

STATE GOVERNMENT



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

LOCAL GOVERNMENT

This report includes all Local Government units except hospitals and educational institutions such as elementary and secondary schools, vocational high schools, universities, colleges, junior colleges, and technical institutes. Also included are libraries and other types of information centers; mental health centers, convalescent homes, and other health service agencies; and vocational schools (except vocational high schools) and other types of training facilities which are part of any other Local Government function such as police training academies or administrative training centers.

Multiple job holders (performing work in two or more listed occupations) were classified only once in the occupation requiring the highest level of skill. Working supervisors (those spending 20% or more of their time at work similiar to that performed by workers under their supervision) were classified in the occupations that most closely related to their work duties. Employees whose wages were reimbursed through CETA Titles II and VI (Public Service Employment Act) were classified in the occupation in which they were currently employed.

LOCAL GOVERNMENT

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
TOTAL EMPLOYMENT.....	147,985	100.00	na	na
MANAGERS, OFFICERS, ELECTED OFFICIALS, AND PUBLIC ADMINISTRATION INSPECTORS, TOTAL...	9,300	6.28	na	na
Chief Executives, General Administrators, and Legislators.....	2,640	1.78	15.77	92
Construction Inspectors.....	1,100	.74	14.15	62
Public Administration Inspectors, Except Construction.....	630	.42	6.82	44
All Other Managers and Officers..	4,930	3.33	na	na
PROFESSIONAL AND TECHNICAL OCCUPATIONS, TOTAL.....	19,715	13.32	na	na
Accountants and Auditors.....	905	.61	7.37	70
Agricultural Scientists.....	135	.09	33.13	21
Assessors.....	1,180	.79	15.56	70
Budget Analysts.....	105	.07	15.68	25
Caseworkers.....	2,255	1.52	13.58	40
Chemists.....	85	.05	7.00	12
Civil Engineering Technicians....	205	.13	12.51	28
Civil Engineers.....	475	.32	5.60	54
Community Organization Workers...	420	.28	13.34	28
Computer Programmers.....	245	.16	9.53	47
Dietitians and/or Nutritionists..	90	.05	42.83	15
Drafters.....	505	.33	5.71	55
Electrical and Electronic Engineers.....	105	.07	19.37	15
Electrical and Electronic Technicians.....	240	.16	18.42	20
Group Recreation Workers.....	1,555	1.05	10.00	46
Judges.....	1,395	.94	13.93	82
Law Clerks.....	215	.14	44.86	24
Lawyers.....	1,360	.91	9.39	78

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
PROFESSIONAL AND TECHNICAL OCCUPATIONS (Continued)				
Librarians, Professional	880	.59	7.49	59
Licensed Practical Nurses	305	.20	43.56	22
Magistrates	830	.56	24.20	30
Medical and Dental Technicians	275	.18	8.72	19
Nurses, Professional	550	.37	12.20	36
Paralegal Personnel	155	.10	12.52	21
Personnel and Labor Relations Specialists	420	.28	7.93	48
Photographers	75	.05	17.30	25
Physicians and/or Surgeons	205	.13	20.85	38
Physician's Assistants	80	.05	22.22	6
Public Relations Practitioners	120	.08	18.39	24
Purchasing Agents and/or Buyers	195	.13	11.47	60
Radio Operators	95	.06	8.72	11
Science Technicians	100	.06	11.43	18
Surveyors	280	.18	8.35	45
Systems Analysts, Electronic Data Processing	235	.15	8.78	36
Tax Examiners, Collectors, and/or Revenue Agents	1,160	.78	29.20	65
Technical Assistants, Library	535	.36	19.30	40
Traffic Technicians	105	.07	5.14	26
Urban and Regional Planners	295	.19	5.92	39
All Other Engineering Technicians	250	.16	na	na
All Other Engineers	2/			
All Other Life Scientists	80	.05	na	na
All Other Physical Scientists	2/			
All Other Social Scientists	2/			
All Other Therapists	35	.02	na	na
All Other Professional Workers	430	.29	na	na
All Other Technical Workers	315	.21	na	na
SERVICE OCCUPATIONS, TOTAL	43,940	29.70	na	na
Fire Fighting and Prevention Supervisors	2,015	1.36	7.47	49
Police and Detective Supervisors	2,950	1.99	5.90	71
Supervisors, Nonworking-Service	690	.46	17.10	35
Bailiffs	455	.30	10.42	31
Child Care Workers	295	.20	17.16	10
Cooks, Institution	365	.24	49.47	28

Occupation	Estimated Empl.	% of Total Empl. 1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
SERVICE OCCUPATIONS (Continued)				
Correction Officers and/or Jailers	1,755	1.18	10.80	45
Detectives, Police	1,715	1.15	6.05	55
Fire Fighters	8,830	5.96	7.68	57
Fire Inspectors	355	.24	15.05	51
Guards and Doorkeepers	695	.46	17.94	29
Janitors, Porters, and Cleaners	3,500	2.36	9.76	86
Parking Enforcement Officers	290	.19	21.32	33
Police Patrol Officers	13,525	9.14	3.91	81
Recreation Facility Attendants	655	.44	10.58	32
School Crossing Guards	1,300	.87	12.90	30
Sheriffs	1,675	1.13	26.08	31
Social Service Aides	460	.31	19.70	21
Ushers, Lobby Attendants, Ticket Takers, and/or Drive-In Theater Attendants	130	.08	22.10	3
All Other Food Service Workers	210	.14	na	na
All Other Service Workers	2/			
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS, TOTAL	45,320	30.63	na	na
Supervisors, Nonworking	1,765	1.19	9.62	58
Ambulance Drivers and/or Attendants	760	.51	36.88	18
Animal Caretakers	875	.59	11.64	46
Bus Drivers	485	.32	11.74	16
Carpenters	370	.25	17.19	39
Cement Masons	75	.05	8.07	15
Diesel Mechanics	95	.06	11.24	20
Electricians	460	.31	12.11	38
Engineering Equipment Mechanics	170	.11	16.44	15
Gardeners and Groundskeepers	2,340	1.58	11.64	67
Heavy Equipment Operators	2,810	1.89	14.82	74
Helpers, Trade	1,640	1.10	12.02	35
Highway Maintenance Men	5,640	3.81	15.95	66
Hydroelectric Machinery Mechanics, Powerhouse Repairers, and/or Gas Plant Repairers	130	.08	15.18	6
Industrial Truck Operators	650	.44	16.92	20
Instrument Repairers	90	.06	15.31	16
Line Installer-Repairers	465	.31	37.94	9

Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
OPERATING, MAINTENANCE, CONSTRUCTION, REPAIR, MATERIAL HANDLING, AND POWER PLANT OCCUPATIONS (Continued)				
Maintenance Repairers, General Utility	2,475	1.67	21.19	60
Mechanics, Automotive	1,520	1.02	6.87	71
Mechanics, Maintenance	640	.43	10.23	26
Painters, Maintenance	230	.15	14.18	26
Plumbers and/or Pipefitters	295	.19	34.03	24
Pump Station Operators, Waterworks	195	.13	21.52	21
Refuse Collectors	3,595	2.43	12.35	51
Service Station Attendants, Fuel Pump Attendants, and/or Lubricators	395	.26	7.11	37
Sewage Plant Operators	1,335	.90	11.42	45
Stationary Engineers	125	.08	11.39	10
Streetlight Repairers and Servicers	250	.16	35.30	25
Substation Operators	165	.11	25.47	7
Surveyor Helpers	325	.21	9.02	39
Treatment Plant Mechanics	200	.13	12.07	24
Truck Drivers	3,590	2.42	7.20	59
Water Meter Installers	415	.28	26.84	28
Water Treatment Plant Operators	1,160	.78	19.61	42
Welders and/or Flamecutters	185	.12	13.83	42
All Other Mechanics and Repairers	525	.35	na	na
All Other Skilled Craftsmen and Kindred Workers	1,080	.73	na	na
All Other Operatives and Semi-Skilled Workers	1,245	.84	na	na
All Other Laborers and Unskilled Workers	6,555	4.43	na	na
CLERICAL OCCUPATIONS, TOTAL	29,485	19.92	na	na
Clerical Supervisors, Office or Plant	700	.47	9.06	49
Accounting Clerks	1,340	.90	9.98	72
Bookkeepers, Hand	350	.23	14.65	32
Bookkeeping and/or Billing Machine Operators	215	.14	31.79	23
Cashiers	880	.59	13.33	58
Computer Operators	365	.24	10.82	59
Court Clerks	1,605	1.08	18.82	70

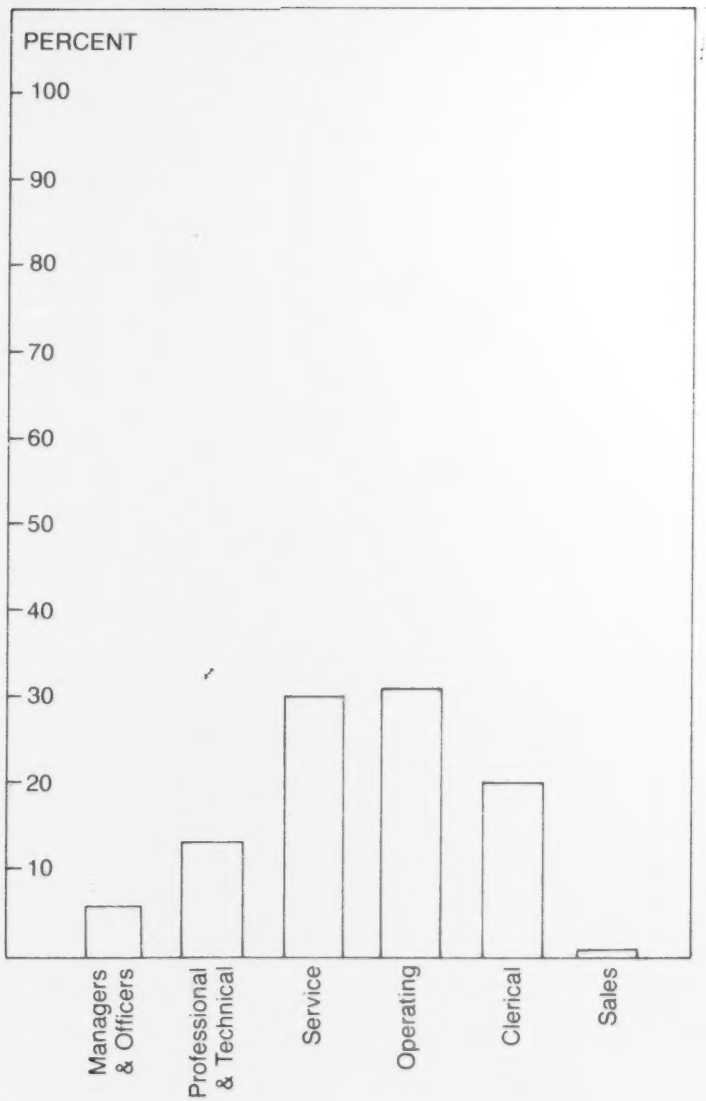
Occupation	Estimated Empl.	% of Total Empl.1/	Relative Standard Error (%)	% of Establishments Reporting the Occupation
CLERICAL OCCUPATIONS (Continued)				
Dispatchers-Police, Fire and Ambulance	2,300	1.55	13.37	80
Dispatchers-Vehicle, Service or Work	165	.11	36.23	23
File Clerks	950	.64	7.98	27
General Clerks, Office	5,070	3.42	14.11	60
Keypunch Operators	460	.30	8.60	56
Library Assistants	1,260	.85	11.05	43
License Clerks	155	.10	13.39	16
Messengers	95	.06	15.11	19
Meter Readers, Utilities	950	.64	12.53	47
Payroll and/or Timekeeping Clerks	295	.20	16.02	57
Personnel Clerks	155	.10	5.40	44
Receptionists	130	.08	6.96	23
Secretaries	3,295	2.22	7.80	87
Statistical Clerks	230	.15	19.08	25
Stenographers	875	.59	11.92	42
Stock Clerks-Stockroom, Warehouse or Storage Yard	375	.25	6.88	55
Switchboard Operator-Receptionists	245	.16	12.80	28
Switchboard Operators	325	.21	10.39	36
Town Clerks	675	.45	23.18	44
Typists	4,895	3.30	16.04	68
Weighers, Recordkeeping	100	.06	36.64	9
All Other Office Machine Operators	235	.16	na	na
All Other Office Clerical Workers	2/			
All Other Plant Clerical Workers	85	.06	na	na
SALES OCCUPATIONS, TOTAL	225	.15	na	na
Sales Clerks	200	.13	29.71	3
All Other Sales Agents, Associates, and/or Representatives	2/			

1/ Based on unrounded data.
2/ Estimate below cut-off level so occupations will not add to category total.

THE MOST COMMONLY REPORTED OCCUPATIONS IN THIS INDUSTRY AND THE PERCENT OF ESTABLISHMENTS REPORTING THEM ARE:

Occupation	Percent
Chief Executives, General Administrators and Legislators	92
Secretaries	87
Janitors, Porters, and Cleaners	86
Judges	82
Police Patrol Officers	81

LOCAL GOVERNMENT



PERCENT OF DISTRIBUTION OF MAJOR OCCUPATIONAL GROUPS

GLOSSARY OF TERMS

Benchmark Employment: A term which is used to identify specific employment figure(s) which existed at a particular point in time. In the OES survey program, the term benchmark is used in two ways: (1) It is the establishment or industry employment that existed at the time the sample was designed. (2) When estimates are made, it is used again to refer to the total universe employment for each estimating cell as of the reference date of the survey.

Establishment: An economic unit which produces goods or services; for example, a consulting service, a factory, or a store. In most instances, each establishment is a single physical location and is engaged in one predominate type of economic activity for which an industry code is applicable. Establishments are also referred to as reporting units.

Estimating Cell: One size class in one industry.

Sample Weight: A numerical value that is assigned to an establishment during the sample selection. For example, if an establishment has an occupational employment of 25 and a weight of three, then for estimating purposes, the 25 employment will have a representation of 75 (3 x 25).

Sampling Error: The difference between data obtained from a sample and data which would have been obtained if the same survey methods were applied to collecting identical information for the entire population.

Sampling Units: The establishments selected randomly from the universe.

Size Class: The stratification of an industry by employment. For example, establishments with employment of 10-19 would be in one size class, and those with employment of 20-49 would be in another size class, etc.

Universe: Total amount of establishments or units covered under the Texas Employment Security Law.

Usable Response: All receipts which, after initial classification and schedule review, are judged to contain usable OES data.

Special Districts: All local entities authorized by State Law with sufficient administrative and fiscal autonomy to qualify as independent governmental units. These are known by a variety of titles including districts, authorities, boards, commissions, etc., as specified in the enabling State Legislation, and which are authorized to provide only one, or a limited number of designated functions or services.

County: The largest territorial division for Local Government within a state of the United States.

Municipalities: A primarily urban political unit having corporate status and usually powers of self-government.

BIBLIOGRAPHY

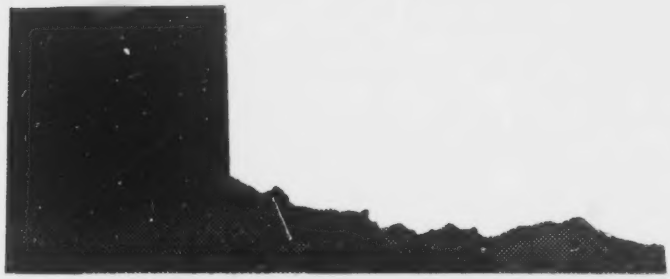
Dallas Morning News, Texas Almanac, Dallas: A. H. Belo Corporation, 1980-1981 Edition.

United States Department of Labor, Occupational Outlook Handbook, 1980-1981 Edition, Washington, D.C. 20402, U. S. Government Printing Office.

1/6/81

S 96.73:1.4

TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS



INDUSTRY STAFFING PATTERNS FOR SELECTED TRADE AND REGULATED INDUSTRIES

TEXAS EMPLOYMENT COMMISSION
In cooperation with the U.S. Department of Labor
Bureau of Labor Statistics and the Employment
and Training Administration

TEXAS OCCUPATIONAL EMPLOYMENT STATISTICS

INDUSTRY STAFFING PATTERNS FOR SELECTED TRADE AND REGULATED INDUSTRIES

2nd QUARTER 1979

Prepared by
Texas Employment Commission
Economic Research and Analysis
TEC Building
Austin, Texas 78778

Issued August 1980

PREFACE

This publication summarizes the results of an occupational employment survey of selected Trade and Regulated Industries in Texas.

This report is the product of a Federal-State Cooperative Program. The Bureau of Labor Statistics developed the procedures and provided technical assistance. The Employment and Training Administration funded the project and was responsible for the administrative aspects of the program. The Texas Employment Commission collected and analyzed the data, provided the necessary computer services, and published these findings.

Special thanks are extended to the many cooperating employers who provided the survey data which made this publication possible.

TABLE OF CONTENTS

		Page
Preface		iii
Introduction		1
Methodology		3
Considerations of the Uses of the Estimates		5
Staffing Patterns for Selected Regulated Industries		7
Industry Characteristics		9
Table 1	SIC 411, Local and Suburban Passenger Transportation, Statewide	10
Table 2	SIC 42, Motor Freight Transportation and Warehousing, Statewide	13
Table 3	SIC 421, Trucking, Local and Long Distance, Statewide	17
Table 4	SIC 422, Public Warehousing, Statewide	21
Table 5	SIC 442, Deep Sea Domestic Transportation, Statewide	24
Table 6	SIC 45, Transportation by Air, Statewide	27
Table 7	SIC 451, Air Transportation, Certificated Carriers, Statewide	31
Table 8	SIC 48 (Excludes SIC 483), Communication, Statewide	35
Table 9	SIC 481, Telephone Communication (Wire or Radio), Statewide	39

TABLE OF CONTENTS (CONTINUED)

		Page
Table 10	SIC 483, Radio and Television Broadcasting, Statewide.....	43
SIC 40-49,	Transportation, Communication, and Public Utility Employment, 1975.....	46
Staffing Patterns for Selected Trade Industries.....		47
Industry Characteristics.....		49
Table 11	SIC 518, Beer, Wine, and Distilled Alcoholic Beverages, Statewide.....	51
Table 12	SIC 551, Motor Vehicle Dealers (New and Used), Statewide.....	55
Table 13	SIC 557, Motorcycle Dealers, Statewide.....	59
Table 14	SIC 596, Nonstore Retailers, Statewide.....	62
Table 15	SIC 598, Fuel and Ice Dealers, Statewide.....	66
SIC 50-59,	Trade Employment, 1975.....	69
Glossary of Terms.....		71
Bibliography.....		73

GRAPHS

		Page
Graph 1	SIC 411, Local and Suburban Passenger Transportation.....	12
Graph 2	SIC 42, Motor Freight Transportation and Warehousing.....	16
Graph 3	SIC 421, Trucking, Local and Long Distance.....	20
Graph 4	SIC 422, Public Warehousing.....	23
Graph 5	SIC 442, Deep Sea Domestic Transportation.....	26
Graph 6	SIC 45, Transportation by Air.....	30
Graph 7	SIC 451, Air Transportation, Certificated Carriers.....	34
Graph 8	SIC 48 (Excludes 483), Communication.....	38
Graph 9	SIC 481, Telephone Communication (Wire or Radio)..	42
Graph 10	SIC 483, Radio and Television Broadcasting.....	45
Graph 11	SIC 518, Beer, Wine, and Distilled Alcoholic Beverages.....	54
Graph 12	SIC 551, Motor Vehicle Dealers (New and Used).....	58
Graph 13	SIC 557, Motorcycle Dealers.....	61
Graph 14	SIC 596, Nonstore Retailers.....	65
Graph 15	SIC 598, Fuel and Ice Dealers.....	68

INTRODUCTION

The Occupational Employment Statistics (OES) Program is a part of a Federal-State Cooperative Program involving State Employment Security Agencies in conjunction with the Employment Training Administration and the Bureau of Labor Statistics. The Program furnishes current estimates of industry staffing patterns by occupation through periodic surveys of the nonfarm wage and salary sector of the economy. Texas has been involved in this Program since 1974 and is one of 46 participating states.

The OES Program is designed to: (1) provide accurate profiles of occupational resources by industry and trends in the number of workers employed by occupation, (2) aid in projections of future manpower requirements by industry and occupation, and (3) identify emerging and disappearing occupations. This information helps in the development of educational and training programs and provides valuable information for employment counselors and manpower planners. Data is generated to show the occupational profile of selected industry groups so that individual firms will be able to compare their occupational staffing patterns to that of the industry of which they are a part. These data will be used to refine and modify the worker-demand projections generated through the Industry-Occupation Matrix System.

This report represents Trade and Regulated Industry data collected during the survey period. All respondents were requested to include employment data for the appropriate survey month--April 12, May 12, or June 12 of 1979.

This publication, and others of its type to follow, will be continually updated, as well as improved, to provide a better basis for decision-making at all levels of human resource planning and development.

METHODOLOGY

The Sample

The Second Quarter 1978 Report of Employment, Wages and Contributions Covered by the Texas Unemployment Compensation Act was used as a sampling frame for the Occupational Employment Statistics Survey of Trade and Regulated Industry Establishments.

The sampling frame was stratified by three-digit (in some cases two-digit) SIC (Standard Industrial Classification) codes and by nine employment size groups and was then collapsed to seven classes of employment: 1-9, 10-19, 20-49, 50-99, 100-249, 250-499, and 500 plus. Establishments with over 250 employment were automatically included in a separate size class and were picked with certainty. All other establishments were subject to sample selection on a random basis, with the units in larger size classes having a proportionately higher chance of selection. Each unit was given a weight according to the proportion of firms selected in each size class. The sample included 7,673 establishments with a represented benchmark employment of 1,689,557.

Sampling Error

The sampling error is an arithmetic measure of the precision of the estimate. It can be considered as the difference between the estimate computed from the sample and the results that would have been obtained if the same methods were used to collect identical information from the universe (all available establishments). The relative errors listed in this report are the absolute sampling errors of each occupation expressed as a percent of that occupational estimate. This measure of precision is on the same base, a percentage comparison. The relative errors shown in this report are such that the chances are two out of three (68 percent) that the results of such a complete survey of all firms would not differ by plus or minus one relative standard error from the OES occupational estimates, and an interval of two relative standard errors will yield a 95 percent confidence level. For example, the OES estimate of employment in Communication (SIC 48, excludes 483) for the number of Accountants and Auditors employed was 220 with a relative standard error of 10.73 percent. The chances are two out of three that the true number of workers employed in that occupation at the time of the survey was between 196 and 244 ($220 \pm .1073 \times 220$), and we may be 95 percent certain that the true number fell between 173 and 267 ($220 \pm 2 \times .1073 \times 220$). The relative standard error allows the user to judge, with a given degree of confidence, the quality of any particular occupational estimate. It is a measure

of the relative dispersion within the data collected, and indicates the occupational coefficient of variation of the population from which the sample was drawn.

Nonsampling Error

A survey of this magnitude is going to have a small degree of nonsampling error. Examples of these errors are faulty questionnaire design, inaccuracy of data furnished, ineffective processing, and nonresponse. The possibility of errors in the design of and the data furnished by the questionnaires, as well as errors in processing, was recognized from the start of the survey. Every effort was exercised to avoid and control them. The nonresponse area was handled to a large degree by the built-in variables of the sampling and estimating process. This process takes into consideration that the occupational distribution of the nonreporting sample unit in a given three-digit employment size class is the same as among the reporting establishments of that size class.

Estimating Procedure

A ratio method, an established statistical procedure, was used throughout the report. Any given size class of any given industry represents an estimating cell. All establishments in a given cell are assigned a sample weight which is the inverse of the sampling ratio. There is a direct relationship between employment and the number of units within a size class to determine the ratio, or the probability of sample selection. The employment for any specific occupation in each establishment is inflated by its sample weight and summed for all sample establishments in the cell. A ratio is then derived of the weighted employment for each occupation to the weighted reported total employment. This ratio is then multiplied by the benchmark employment for that estimating cell as of the appropriate survey month--April 12, May 12, or June 12 of 1979, thus yielding the occupational make-up of the estimating cell for that date. Like occupational employments are summed across all employment size classes within each three-digit SIC to arrive at a total industry employment for each occupation. Two-digit estimates of occupational employment were derived by summing estimates across three-digit SIC industries.

Collection Procedures

The majority of the data was collected by mail. Survey operations included an initial mail out and two follow-ups to nonrespondents (in some cases three, where nonresponse was a critical factor). The telephone was used extensively to clarify information, handle critical nonresponse areas, and prompt small and medium-size respondents to furnish survey data.

CONSIDERATIONS OF THE USES OF THE ESTIMATES

Relative Error

Relative error is a measure of precision and expresses the absolute sampling error of an estimate as a percentage of that estimate. From an accuracy standpoint, the higher the relative error - the less accurate the estimate. If relative errors exceeded fifty percent, the employment from these occupations was merged with the employment of the "all other" residual category that was relevant to them.

Throughout the tables, it should be noted that the relative error is computed only for specific occupations and not for residual categories nor for occupational groupings. These are noted by "na" (not applicable).

Rounding Errors and Occupations With Employment Less Than Thirty

All percentage estimates were carried out to two decimal places with the exception of the percent of establishments reporting the occupation. These percentages were rounded to the nearest whole number.

In each SIC (Standard Industrial Classification), many more occupations were surveyed than are actually shown in the tables. Occupations which had employment of less than thirty were suppressed, and their employment was added to the residual category for their major occupational group.

Industrial Classification With Benchmark Employment of Less Than One Thousand

Some of the industry groups surveyed had an insignificant amount of benchmark employment--less than one thousand. In order for the user to have meaningful occupational staffing patterns, the industry was suppressed or collapsed to the major two-digit industry group totals.